Exhaustively as Cell Identification

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UMASS, October 2017
The Function of a Question

To Introduce a Topic of Conversation (question as partition)
Example

Suppose we want to know:

Which propositions (if any) among p and q are true?

(with p and q logically independent)

In other words, what’s at issue is how to locate ourselves in the following partition (G&S):

\{ \neg p \& \neg q, p \& \neg q, q \& \neg p, p \& q \}
The Denotation of a Question

Any set of Propositions – not necessarily a partition

(Karttunen, Heim...)

Claim

There is a constraint on questions that demands **perfect correspondence between denotation and partition**.

For: \([Q] = \{p, q\}\)

the following has to partition *the common ground*:

\[
\{\text{Exh}(Q, p), \text{Exh}(Q, q)\} = \{p \& \neg q, q \& \neg p\}
\]

Recall: \(\neg p \& \neg q, p \& \neg q, q \& \neg p, p \& q\) is the partition of *logical space*
Question Partition Matching

If $Q$ is a question and $P_Q$ is the partition of the common ground, the following two conditions must hold:

$$\forall C \in P_Q \exists p \in Q \quad \text{Exh}(Q, p) \text{ identifies } C$$

$$\forall p \in Q \exists C \in P_Q \quad \text{Exh}(Q, p) \text{ identifies } C$$
Like Dayal (1996), but

More permissive in that, for:

\[ Q = \{ p, q, p \text{ or } q \}, \]

the following is a good partition:

\[ \{ p \& \neg q, q \& \neg p, p \& q \} \]
Mention Some

This logical observation underlies my proposal for *Mention Some* Readings
Like Dayal (1996), but

*Less permissive* in that,

if

\[ Q = \{p, q, p \text{ or } q, p \text{ and } q\}, \]

there will be no way to meet the requirement.

Since no cell will correspond to

\( p \text{ or } q \)
Spector Negative Islands

This logical observation underlies my account of a Negative Island identified by Spector
Goals for Today

a. To present the arguments for Question Partition Matching

b. To explain how the emerging view of exhaustivity (as bridge between the denotation and function of a question) might bear on debates between semantic and pragmatic approaches to Scalar Implicatures.
Potential Consequences for a Theory of Scalar Implicatures
Common Criticism of Grammatical Approaches to Scalar Implicatures:

Stipulate what should follow from basic principles of language use (Geurts & Pouscoulous, Van Rooij, ..., and most people we talk to)
Van Rooij (2010):

In the words of Geurts & Pouscoulous (2009b), “Defining an operator is one thing; providing a principled pragmatic explanation is quite another”
Fox (2007, 2014):

Pragmatic theories of SIs are incompatible with basic truisms.
As such, they cannot be conceptually preferable to grammatical alternatives.
The issue is primarily empirical.

By now there is non-trivial evidence in favor of grammatical approaches (Crnic, Chierchia, Fox, Horvath, i.a.)
Exhaustivity as Cell Identification:

a. Provides further empirical support for grammatical approaches:
   
   we’ve seen an additional domain (other than SI’s) where *exh* plays a role.

b. Fits better within the conceptual grounding of the grammatical theory that I’ve offered in Fox (2007, 2014)